Docket No. RSW920030104US1

ABSTRACT OF THE DISCLOSURE

MULTIDIMENSIONAL HASHED TREE BASED URL MATCHING ENGINE USING PROGRESSIVE HASHING

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A mechanism by which URLs are progressively hashed character by character and clauses of the URL are used to traverse a tree data structure for matching of the URL to resources/rules is provided. The hash code for a single character is appended to a prior hash code for a preceding character in the URL portion. At the time that the entire portion of the URL is hashed, as determined based on the presence of a delimiter character, the particular node in a tree data structure associated with the resulting hash code is identifiable within a hash table of a current node of the tree data structure. Each node in the tree data structure includes a multidimensional hash table for a portion of a URL. The multidimensional hash table is established and grown in a manner that ensures there are no hash collisions. Each portion of the URL is parsed in this manner and the tree data structure is traversed as each portion is processed until the entire URL is parsed at which time the resulting rules/resources may be identified from the leaf nodes of the tree data structure.